

Mineral Industry Surveys

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TUNGSTEN IN JULY 2003

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, in January through July 2003 was nearly equal in amount to net production during the same period in 2002, according to the U.S. Geological Survey.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through July 2003 was 12% higher than that consumed during the same period in 2002. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for July 2003 will be published in a subsequent issue.

Update

Prices for tungsten ore concentrates, in dollars per metric ton unit from Metal Bulletin, are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO₃) content of 65%. The prices for August 1-31, 2003, are as follows:

Low—\$42/metric ton unit WO₃ (\$38/short ton unit WO₃)
High—\$50/metric ton unit WO₃ (\$45/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Intermediate products				
	Reported consumption	Imports for consumption	Stocks, end of period	U.S. Government ³	Reported scrap consumption	Net production ⁴	Reported consumption ⁵	Stocks, end of period	U.S. Government ³
			Industry ²					Industry ⁶	
2002:									
July	W	362	W	30,400	355	1,030	847	654	1,020
August	W	418	W	30,500	238	1,030	854	737	987
September	W	341	W	30,100	429	1,080	810	742	981
October	W	341	W	30,100	382	1,170	836	705	975
November	W	509	W	30,100	346	1,160	816	733	948
December	W	600	W	30,100	360	949	750	666	947
January-December	W	4,090	XX	XX	4,270	12,000	9,300	XX	XX
2003:									
January	W	250	W	29,800	362	1,000	788	674	927
February	W	253	W	29,800	403	965	750	718	927
March	W	474	W	29,800	476	1,120	777	779	913
April	W	377	W	29,800	399	1,100	863	785	894
May	W	679	W	29,600	312	1,120	904	739	808
June	W	365	W	29,600	298	1,160	893	730	784
July	W	NA	W	29,600	294	1,040	881	684	759
Total	W	NA	XX	XX	2,550	7,500	5,860	XX	XX

NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Reported by consumers.

³Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁴Net production of tungsten metal powder and tungsten carbide powder.

⁵Includes estimates and scrap.

⁶Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH¹

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period ²
2002:			
July	W	720	212
August	W	774	97
September	W	800	102
October	W	798	109
November	W	804	85
December	W	W	68
Total	W	8,860	XX
2003:			
January	W	776	W
February	W	750	61
March	W	851	73
April	W	W	44
May	W	732	38
June	W	772	W
July	W	W	39
Total ³	W	3,880	XX

¹Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Producers and consumers.

³Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS¹

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2003				2003		
	2002	June	July	Year to date	2002	June	July
Metal powder	7,970	891	792	5,340	427	474	398
Tungsten carbide powder (made from metal powder)	4,070	264	243	2,160	239	256	286
Total	12,000	1,160	1,040	7,500	666	730	684

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Gross production less quantity used to make other products in table.

³Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data; not included in "Total."

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE^{1, 2, 3}

(Metric tons, tungsten content)

End use	2003		
	June	July	Year to date
Steels	21	20	153
Superalloys	25	23	186
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	402	389	2,790
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	446	448	2,730
Total	893	881	5,860

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Does not include materials used in making primary tungsten products.

³Includes estimates.

⁴Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS¹

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials ²	Total
Consumption:						
2002:						
July	22	W	400	W	6	847
August	21	W	402	W	6	854
September	22	W	400	W	6	810
October	22	W	403	W	6	836
November	22	W	403	W	6	816
December	23	W	405	W	6	750
Total	274	W	4,840	W	76	9,300
2003:						
January	21	W	400	W	6	788
February	23	W	395	W	6	750
March	21	W	396	W	6	777
April	23	W	404	W	6	863
May	22	W	404	W	6	904
June	20	W	401	W	6	893
July	20	W	393	W	6	881
Total	151	W	2,790	W	42	5,860
Stocks:						
2002:						
July	25	27	298	22	9	379
August	24	24	311	25	9	393
September	20	20	275	20	9	344
October	26	22	273	26	9	356
November	21	27	278	22	9	356
December	18	26	293	23	9	368
2003:						
January	25	24	295	19	9	372
February	20	22	292	20	9	362
March	20	20	285	27	9	361
April	15	24	288	22	9	358
May	29	26	292	21	9	376
June	23 ^r	24	304	21	9	381 ^r
July	23	22	294	27	9	374

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Includes estimates.

²Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other ²	Total	Total year to date
2002	4,090	2,400	480	642	901	1,180	9,690	XX
2003:								
April	377	113	--	119	120	69	798	3,030
May	679	190	30	69	81	162	1,210	4,240
June:								
Austria	--	--	--	--	8	4	12	30
Belgium	--	--	--	(3)	--	--	(3)	2
Bolivia	35	--	--	--	--	--	35	185
Canada	280	--	--	--	53	(3)	333	2,000
China	--	341	15	68	60	110	594	2,010
Czech Republic	--	--	--	--	--	--	--	1
France	--	--	--	--	--	(3)	(3)	3
Germany	--	17	--	15	14	11	57	244
Hong Kong	--	--	--	--	--	1	1	4
Hungary	--	--	--	--	--	1	1	3
Ireland	--	--	--	--	--	--	--	1
Israel	--	--	--	5	20	1	26	229
Italy	--	--	--	--	--	(3)	(3)	(3)
Japan	--	31	--	1	(3)	1	33	114
Korea, Republic of	--	--	--	2	4	(3)	6	68
Luxembourg	--	--	--	--	3	--	3	7
Mongolia	--	--	--	--	--	--	--	10 ^r
Peru	--	--	--	--	--	--	--	21
Portugal	39	--	--	--	--	--	39	278
Russia	--	18	--	--	--	(3)	18	19
Rwanda	11	--	--	--	--	--	11	102
Singapore	--	--	--	(3)	--	2	2	3
Spain	--	--	--	--	--	(3)	(3)	(3)
Sweden	--	--	--	--	--	(3)	(3)	5
Taiwan	--	--	--	--	--	(3)	(3)	15
Thailand	--	--	--	--	--	--	--	16
United Kingdom	--	--	--	--	--	(3)	(3)	21
Other	--	--	--	--	--	(3)	(3)	1
Total	365	407	15	90	161	133	1,170	5,410
Total, year to date	2,400	1,170	126	455	690	566	5,410	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

³Less than 1/2 unit.

Note: Imports of waste and scrap in June 2003 totaled 39 metric tons, tungsten content, to give a year-to-date total of 615 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates ²	Ammonium tungstates	Metal powder ²	Tungsten carbide powder	Other ³	Total	Total year to date
2002	94	69	496	1,250	1,050	2,960	XX
2003:							
April	(4)	1	91	229	199	521	1,540
May	(4)	53	78	254	98	483	2,020
June:							
Australia	--	--	(4)	--	(4)	(4)	3
Belgium	--	--	16	3	5	23	35
Brazil	--	--	(4)	(4)	1	2	23
Canada	--	--	3	4	4	11	108
Chile	--	--	--	--	--	--	1
China	--	--	(4)	--	1	1	16
Colombia	--	--	--	--	(4)	(4)	1
Czech Republic	--	--	--	--	(4)	(4)	1
Egypt	--	--	--	--	--	--	1
Finland	--	--	(4)	--	--	(4)	1
France	--	--	1	2	5	8	152
Germany	--	19	22	69	13	124	913
Hong Kong	--	--	--	--	3	3	6
Hungary	--	--	--	--	(4)	(4)	(4)
India	--	--	50	(4)	1	51	65
Indonesia	--	--	(4)	--	--	(4)	1
Ireland	--	--	--	1	1	2	11
Israel	--	--	29	--	2	31	86
Italy	--	--	3	(4)	(4)	4	33
Japan	--	--	1	1	4	7	49
Korea, Republic of	--	--	(4)	4	(4)	4	16
Luxembourg	--	--	(4)	--	--	(4)	6
Malaysia	--	--	--	--	(4)	(4)	10
Mexico	--	--	--	1	5	5	127
Netherlands	--	--	(4)	--	14	14	73
New Zealand	--	--	--	--	--	--	2
Philippines	--	--	--	--	6	6	12
Poland	--	--	--	--	--	--	2
Singapore	--	--	1	--	--	1	9
Slovakia	--	--	--	--	(4)	(4)	5
South Africa	--	--	--	10	(4)	10	56
Spain	--	--	(4)	(4)	4	5	17
Sweden	--	--	31	--	(4)	31	175
Switzerland	--	--	--	1	--	1	5
Taiwan	(4)	--	1	--	25	27	151
Turkey	--	--	--	--	--	--	2
United Kingdom	--	--	3	37	6	46	264
Other	--	--	(4)	1	(4)	1	3
Total	(4)	19	162	134	104	418	2,440
Total, year to date	5	75	490	1,160	717	2,440	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Tungsten content estimated from reported gross weight.

³Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

⁴Less than 1/2 unit.

Note: Estimated exports of waste and scrap in June 2003 totaled 91 metric tons, tungsten content, to give a year-to-date total of 240 metric tons, tungsten content.

Source: U.S. Census Bureau.